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A VISUAL REVIEW OF COMPENSATION PHILOSOPHIES FOR ISLAMIC CERAMICS

Meg Loew Craft*

The treatments of three twelfth- to thirteenth-century Islamic bowls undertaken in 1992-1994 presented an opportunity to review the aesthetic options available for compensation. Treatments were undertaken to replace deteriorated, discolored, old restorations that rendered the bowls aesthetically undisplayable and, in one case, structurally unstable. The old restorations were undocumented and were probably carried out in the late nineteenth or early twentieth century prior to acquisition by their current owners. The past restorations had been carried to extremes to obscure losses and damages to make the objects appear intact. Original surface decoration was covered over and deceptive retouching did not follow the underlying decoration.

The bowls belonged to the collections of two fine arts museums, The Cincinnati Art Museum in Cincinnati, Ohio, and The Walters Art Gallery in Baltimore, Maryland. The ceramics were viewed as art objects prized for their beauty and rarity and were displayed out of cultural context. The appearance of each individual object became very important. In a different setting, such as in a study or research collection, the aesthetic appearance might not be as significant. The intent of the treatment was to reveal the extant decoration without deception but at the same time to present an aesthetically pleasing and understandable form.

In the new repairs, inpainting was restricted to areas of loss. Missing design elements were replaced only where repetitive or to complete gaps in obviously connecting lines. No inscriptions or figurative elements were invented. While this is a consistent and logical philosophy, actual execution of details on individual pieces during treatment forced us to consider additional factors, such as the condition of the surface and the extent of losses. Many details had to be decided based on consultation between the curator and the conservator.

The old repairs had been carried out using traditional materials including shellac and hide glue for adhesives, plaster for fills, and oil paint and natural resin varnishes for inpainting. More than one campaign of restoration was apparent on all the bowls. In addition, ceramic restorations were fired and inserted to complete the fragmentary forms of two of the bowls. Former restorations illustrated not only the skill of the restorer and the availability of repair materials but also the contemporary philosophy of compensation at that time.

Identification of the ceramic inserts was made by visual observation. Combinations of features used to distinguish the later inserted pieces were: variable shrinkage in size from firing after forming in the loss areas, warpage or distortion of the profile, an increased or decreased number

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of pinholes in the glaze, variations in the glaze color, gloss or texture, and the presence of a rill or ridge of glaze around on the edge of the manufactured inserts. The rill of glaze around the edge of the suspect fragment or glaze wrapping the edge of the fragment onto the cross section of the break were the most convincing features denoting a manufactured fired ceramic insert.

None of the inserts examined appeared to be scavenged from other vessels. Each appeared to be manufactured for the individual bowl being examined. A general determination was made to leave the inserts in place to prevent unnecessary wear and tear on the remaining original fragments during the removal process. The presence of archeological fragments from other vessels would have complicated decisions and demanded special consideration to select a proper treatment course. Marriage of different vessels was not a complication in the treatments of these three Islamic bowls.

The goals of treatment were: first, safety and improved prospects for preservation of the object; second, aesthetic presentation for display; and, third, improved potential for study or research. Three treatment case studies demonstrate different solutions to achieve a balance between the aesthetic demands for display in a fine arts setting and, at the same time, to avoid deception.

Ceramic Body and Glaze Characteristics

After determining the goals of treatment, a brief review of the types of ceramic ware and their methods of manufacture was necessary before evaluating the condition of the individual objects. In the case studies presented, the two types of Islamic ceramic wares, lusterware and overglazed enameled or painted and gilded Minai ware, are noted for reaching technological high points in glazing and decoration.

The ceramic body, which is reported to be composed primarily of quartz with alkaline frit and clay, was an attempt to imitate Chinese porcelain in Persia where ingredients and firing technology were unavailable. The fritted body, made from ground pebbles, plant ash, and a light-colored, high-shrinking clay, was fired at a low temperature. The resultant body was more similar to Egyptian faience than to Chinese porcelain. The body was molded for large or complicated forms but could be hand thrown for smaller, simple shapes. The pieces were trimmed to reduce the thickness of the walls. The resultant fired wares were exceedingly lightweight and white-bodied. The hardness of the treated objects varied from soft and very fine grained to relatively hard, glassy and granular.

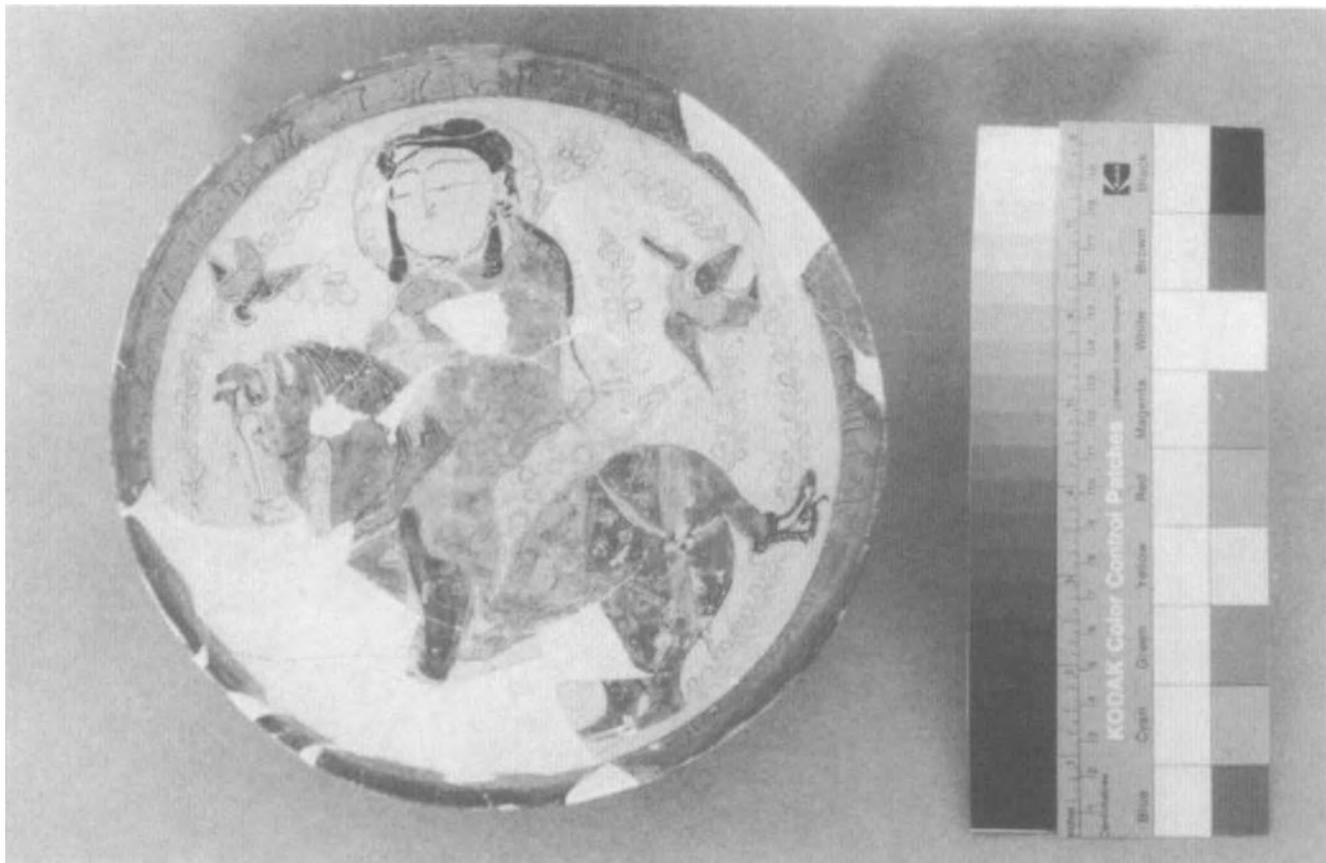


Figure 1. Minai bowl with single mounted horseman and two birds, during treatment, revealing extent losses. (Cincinnati Art Museum 1948.102)

Lusterware is noted for control and refinement of the overglazing process. The wares were initially glazed with a tin-opacified lead glaze in a single firing to mature the body and provide a white background for decoration. The luster overglaze was painted on and then fired in a second, reducing atmosphere. The deep reds are achieved with metallic copper particles suspended in the glaze. Some gold tones are reported to be a mixture of silver and copper. None of the bowls treated were analyzed but the deep wine-red to brown colors in the Zodiac bowl appear to be copper based. The blurred edges of the lines are typical of the copper-based luster which is more difficult to control than the yellow silver lusters. The lead glaze is soft and can be easily scratched or abraded.

Minai (which means enamel) wares are noted for miniature overglaze enamel and gilded decorative hunt or court scenes. The bowls, with background lead-based glaze, were fired in

a single operation. The background color was often copper-based turquoise blue or tin-opacified white. The decorative scenes were then enamel painted and gilded and refired at lower temperatures. The overglaze decoration may be visibly raised above the glazed background and is thick, matte, and painterly in appearance. Adhesion to the body, if not damaged by excessive weathering, salt damage or past repairs, is adequate to permit normal handling. The gilding is poorly adhered to the glazed ceramic. The gilding is often worn, fragile, and easily damaged by handling and any abrasion, which may limit treatment.



Figure 2. Minai bowl with single mounted horseman and two birds, after treatment, with background tones inpainted in loss areas. (Cincinnati Art Museum 1948.102)

Case Study 1: Minai Bowl with Single Mounted Horseman and Two Birds

The Minai bowl decorated with a horseman and two birds (Cincinnati Art Museum, 1948.102) had been broken into approximately 45 pieces and repaired with traditional materials in the past. The small bowl with a straight rim and low foot measured 21 cm. in diameter and 8 cm. in height. The background glaze was opaque white, discolored by entrapped soil in eroded pits to a pale cream color, with a large stained crackle pattern. Overglaze colors included blue, red, black, green, and gold.

When received for treatment the largest fill had already been stripped of discolored overpaint (fig. 1). Small losses were scattered overall. The most substantial loss was located in the lower left quadrant. Approximately 25% of the bowl was lost. Little design was lost with the exception of the horse's lower legs and the red garland on the bowl interior. The sections of the inscription were partially lost on the interior rim. Several border fragments were floating in the large plaster restoration. The joins were stable and primarily well aligned. The fills were strong but rough and not level.

Upon further examination, the eight floating rim fragments with inscriptions on the interior were determined not to be original to the bowl. None had entrapped soil or surface erosion from burial. The outer profile of the bowl suffered minor distortion from the insertion of replacement fragments. Evenly spaced red circles on the exterior rim border were reproduced but improperly spaced on the inserts. The interior border was decorated with partially fired and partially painted strokes to imitate the inscription. Gold details and highlights, which were readily removed by excessive contact, were present on original and inserted fragments.

Since the adhesive joins and large plaster fill were stable, a decision was made not to disassemble the fragments or destroy the fill to remove the inserts. Old overpaint was removed with acetone. Uneven fills were leveled and surfaced using Polyfilla Fine Surface filler.¹

During treatment, losses to the interior of the bowl were inpainted with acrylic emulsion colors to reproduce the background white and the blue border colors. Initially, an attempt was made to reproduce a partial outline of the lost horse legs and the red garland on the largest interior loss. The trial was rejected by the curator and removed. The loss was inpainted to match the background glaze color with the crackle pattern (fig. 2). The restored inscriptions on the interior border and the mismatched turquoise band on the exterior border of the inserts were toned to match the background colors.

In summary, inserted fragments were left in situ to avoid unnecessary wear and tear on the original. Losses and deceptive decoration on inserts were toned to match the background colors.



Figure 3. Minai bowl with three mounted horsemen, front, before treatment. (Walters Art Gallery 48.1079)

Case Study 2: Minai Bowl with Three Mounted Horsemen

The Minai bowl decorated with three mounted horsemen (Walters Art Gallery, 48.1079) was broken into at least 41 fragments and repaired in the past. The small bowl with a straight rim and low foot measured 19.9 cm. in diameter and 8 cm. high. The figures and inscriptions were painted in polychrome enamel and gilding on an opaque turquoise background. Fragments were well aligned and securely held with dark red-brown shellac. Joins and losses were filled and

overpainted with a blue tinted gesso and natural resin-based paint. The fills had cracked and the overpaint turned a grey or yellow-white color. The old compensation was discolored and deteriorated, extended beyond the damages, and did not faithfully follow the original decoration (see figs. 3,4,6).

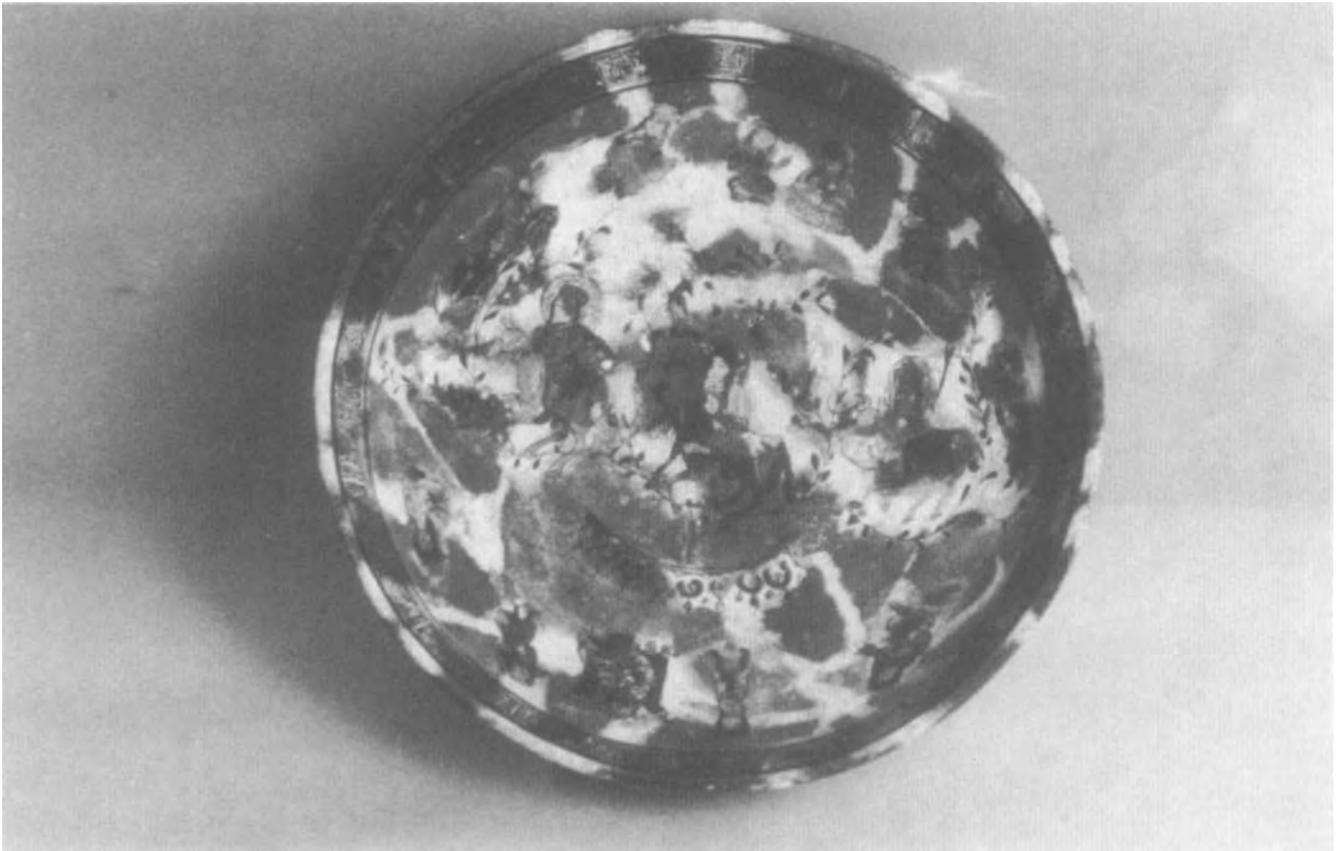


Figure 4. Minai bowl with three mounted horsemen, front, viewed in ultraviolet light. (Walters Art Gallery 48.1079)

Upon further examination, 11 fragments comprising approximately 40% of the bowl were found to be fired ceramic inserts. The inserted fragments were distinguished by the following features which differed from the original:

- the turquoise background glaze was brighter in color
- the surface iridescence/soil was applied with an adhesive and was shinier in gloss than that found on the original
- a rill of glaze was visible around the perimeter of some of the inserts indicating an

- unbroken edge and glaze dripping over the edge during firing
- fewer but deeper pinholes in the glaze
- minor irregularities on the rim perimeter
- portions of the decoration were painted on in combination with firing
- the black exterior inscription was darker, shinier with slightly thicker strokes
- the edges of the original fragments adjacent to inserts were sanded.



Figure 5. Minai bowl with three mounted horsemen, front, after treatment, with inpainting to unite old fired restorations with extant figures. (Walters Art Gallery 48.1079)

Overfill and overpaint were removed using ethanol and/or distilled water. On the interior, overpainting of the figures re-enforced the original but was more crude. The original was fine lined and very abraded. Many elements, such as leaves and branches, were invented to obscure damages. After cleaning, it was revealed that nearly every figure on the interior of the bowl was partially restored. At the same time, no figures were complete inventions. To present an

understandable form for display, extensive new restorations would have to have been undertaken if the bowl was disassembled to remove inserts.

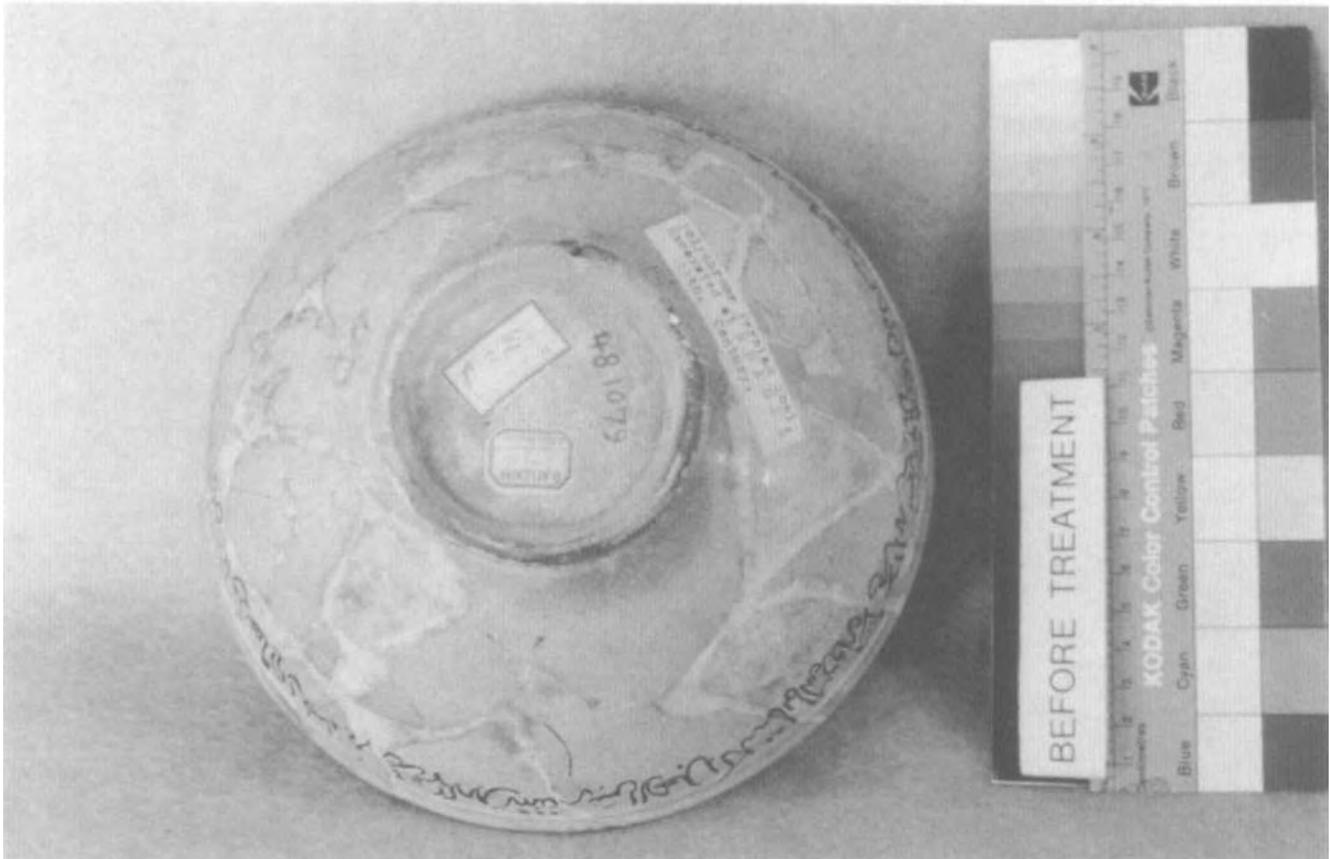


Figure 6. Minai bowl with three horsemen, reverse, before treatment. (Walters Art Gallery 48.1079)

As in the first treatment example, a decision was made not to disassemble the fragments to avoid unnecessary abrasion and handling of extant fragments and to avoid the need for creative inpainting. To allow serious scholars to locate inserts, the exterior, which was not easily viewed by the general visitor, was fully cleaned. The gaps between fragments were filled to just below level and inpainted a uniform shade of turquoise. No effort was made to disguise the differences in color, gloss or condition to permit the inserts to be easily identified. This was important to permit study of the inscriptions on the interior and exterior of the bowl. A different course was taken on the interior to present a unified surface for the museum visitor. Losses to the figures were inpainted to join the original and the old fired restorations on the inserts. The border inscription was toned to match the cobalt-blue background. The turquoise background was toned

to match the original both in color and in sheen using Liquitex acrylic emulsion colors² and Soluvar acrylic varnish.³

In summary, the exterior of the bowl was very conservatively treated leaving damages and inserts fully exposed. The interior was more aggressively inpainted to present an impression of a complete bowl. All extant decoration was left visible (figs. 5,7).

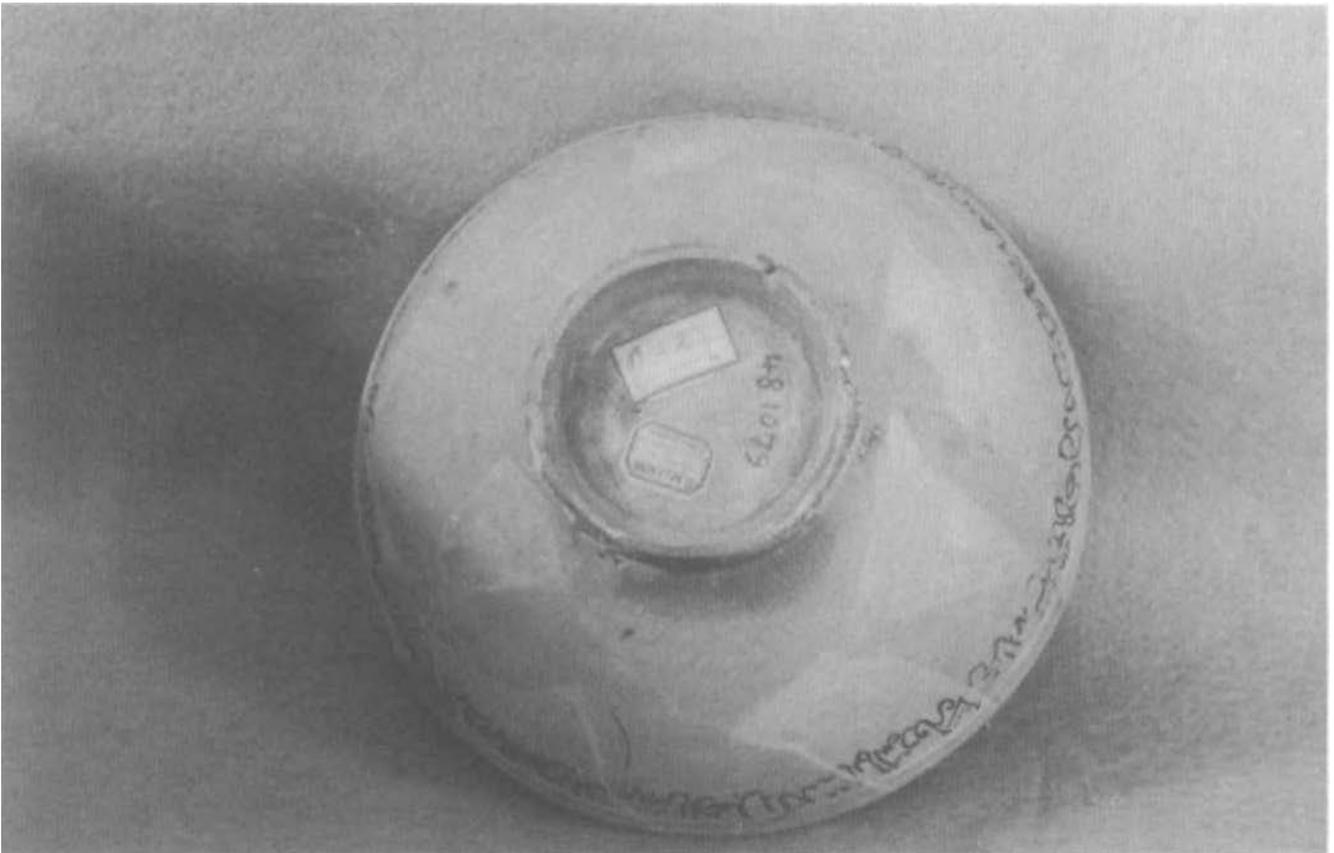


Figure 7. Minai bowl with three mounted horsemen, reverse, after treatment, with inserts left visible. (Walters Art Gallery 48.1079)

Case Study 3: Lusterware Bowl with the Signs of the Zodiac and Dervishes

The lusterware bowl with the signs of the zodiac and dervishes (Cincinnati Art Museum, 1948.113) illustrates the most difficult and challenging treatment due to the extensive losses and poor condition of past repairs. The large bowl with straight rim and very low foot measured 43.6 cm. diameter and 10.5 cm. height after treatment. The overall decoration was painted with a copper-based luster which produced a dark red-brown pattern on an opaque tin-opacified lead glaze background.



Figure 8. Lusterware bowl with the signs of the zodiac and dervishes, detail of fragments before treatment. (Cincinnati Art Museum 1948.113)

Initial examination indicated that approximately 50% of the bowl survived. Approximately 11 fragments were clustered together on one side, although there were no clear joins between some

of the pieces (fig. 8). The other side of the bowl was a plaster restoration painted with discolored bronze powder paint. The restoration had been broken and repaired in the past and was not in stable condition.

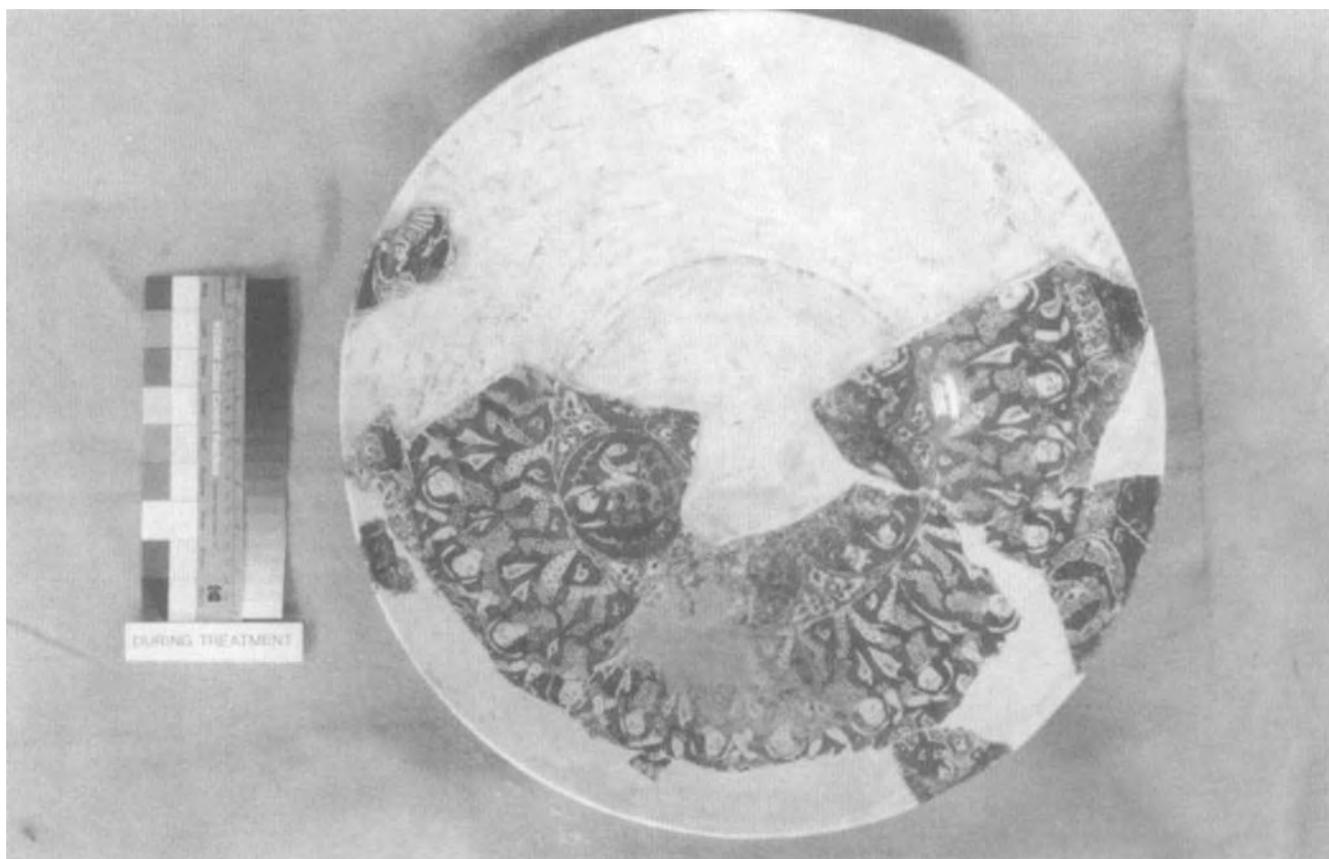


Figure 9. Lusterware bowl with the signs of the zodiac and dervishes, after removal of overpaint. (Cincinnati Museum of Art 1948.113)

Surface cleaning to remove the overpaint revealed losses far more extensive than anticipated (fig. 9). The bowl was in fact less than 40% intact. The surviving fragments appeared to belong together without inserts or composite construction. The fragments were improperly arranged, forcing extensive overfilling to cover the misalignment. Overpainting did not follow existing design or inscriptions below. The bowl was extremely distorted and warped from manufacture and firing. The profile existed from the center of the base to the rim in only two places and was not consistent in either location.

Treatment possibilities were reviewed with the curator and it was decided to continue treatment for display. The following options were considered:

1) Display the fragments on a plexiglass mount or other stand. Advantages were minimal treatment and expense, and ease in future treatment or re-arrangement of fragments. Disadvantages were the difficulty in recognizing the signs of the zodiac and in mounting the pieces to communicate the fragments as a bowl.

2) Complete the form and paint the restoration a background color. An advantage was ease in recognizing the object as a bowl. Color options were the tin-opacified white background, the red-brown luster of the decoration or some other color coordinated with the bowl or with the display case. The gloss could also be adjusted.

3) Complete the form and inpaint the outlines of the missing design medallions on a background color. This educational approach furthered the idea of completing the form and pattern of missing medallions, which was known information. The disadvantage would be the contrast between the retored and original fragments.

4) Carry out more extensive restoration of the design. This was not seriously considered or attempted due to a lack of information about the missing design elements. Traditionally, the zodiac symbols were not arranged in any specific order. Old reconstructions did not offer confidence-inspiring information about losses.

Prior to disassembling the old restorations, silicon rubber molds of the interior and the exterior were made. The molds were re-enforced with cheesecloth but left thin enough to be flexible. The old restorations were removed and discarded. Groups of joining fragments were assembled using very thick Acryloid B-72⁴ in toluene as the adhesive and as an isolation layer for all exposed edges. The fragment groups were arranged to allow for the best alignment and smoothest profile. Sections of the exterior silicon rubber mold were distorted and secured to an outer support made of plasticine. The fragments were laid on the mold and weighted into place. The losses were skim coated with Liquitex Acrylic Modeling Paste⁵ directly onto the mold. After drying, the structural core of the fills was made with HXTAL Crystal Plus epoxy⁶ bulked with microballoons and fumed silica. Finally the interior surface was skimmed with modeling paste.

Option 3 was chosen and carried out using a white background with dark narrow lines to delineate medallions (fig. 10). While logical, the aesthetic result was unacceptable. The lines distracted from the fragmentary remains. The final and most aesthetically pleasing decision was an intermediate solid red-brown color coordinated with but not matching any color on the bowl (fig. 11). The intermediate color allowed the existing decoration to be appreciated and, at the

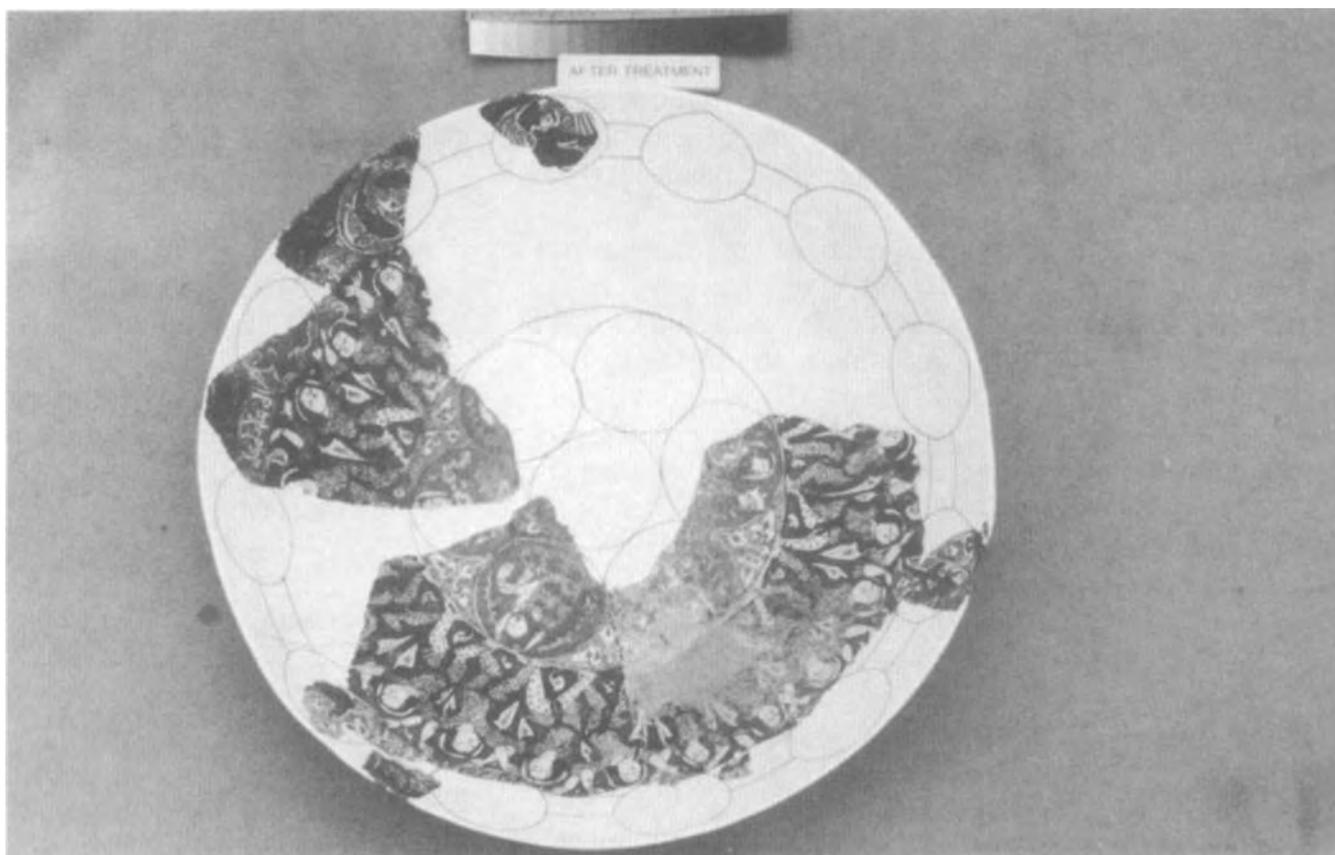


Figure 10. Lusterware bowl with the signs of the zodiac and dervishes, after treatment, with indications of medallions on a white background. (Cincinnati Museum of Art 1948.113)

same time, the form to be understood.

Summary

The trend in the philosophy of compensation is toward greater respect for the integrity of the object. The goal for compensation of Islamic ceramics in fine arts museums remains to present a high degree of finish and completeness without being deceptive. Recognition of the fragility of the quartz-frit-clay body and the overglaze decoration and gilding, combined with improvements in conservation materials, has led to safer treatments. It is apparent that there is no one absolute method to achieve a balance between aesthetic presentation, preservation safety, and study potential. Compensation continues to be challenging with the individual object

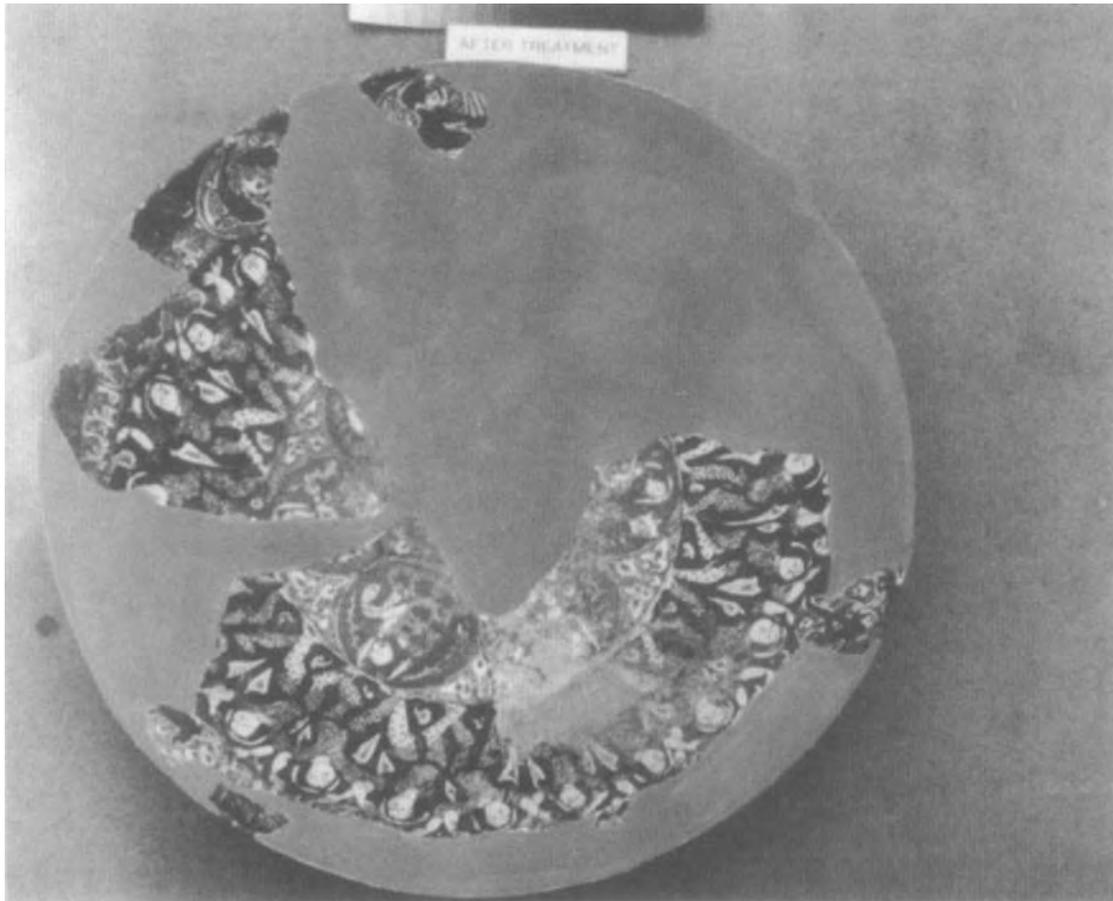


Figure 11. Lusterware bowl with the signs of the zodiac and dervishes, after treatment, with losses toned an intermediate color. (Cincinnati Museum of Art 1948.113)

and its condition guiding the ongoing discussion.

Acknowledgments

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Lane, A. 1947. *Early Islamic Ceramics*.

Endnotes

1. Polyfilla Fine Surface interior filler is manufactured by Polycell Products Ltd., Broadwater Road, Welwyn, Garden City, Herts AL7 3AZ, England, and is available in hardware and department stores in England.

2. Liquitex acrylic emulsion colors are manufactured by Binney & Smith, Inc., Easton, PA 18044-0431, and are available in artists' supply stores.

3. Soluvar Gloss Picture Varnish and Soluvar Matte Picture Varnish are manufactured by Binney & Smith, Inc., Easton, PA 18044-0431, and are available in artists' supply stores.

4. Acryloid B-72, 50% solids in toluene, is manufactured by Röhm and Haas Company, Independence Mall West, Philadelphia, PA 19105, and is available through Conservation Materials Ltd., 1395 Greg Street, #110, Sparks NV 89431, (702) 331-0582.

5. Liquitex Acrylic Modeling Paste is manufactured by Binney & Smith, Inc., Easton, PA 18044-0431.

6. HXTL Crystal Plus epoxy is manufactured by Hillery Enterprises, Inc., Austin, TX 78757, and is available through Conservation Materials Ltd., 1395 Greg Street, #110, Sparks, NV 89431, (702) 331-0582.